

0590
0102

OIPE

7

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/899,595

DATE: 12/20/2001

TIME: 13:47:38

Input Set : A:\00033412.txt

Output Set: N:\CRF3\12202001\I899595.raw

ENTERED

3 <110> APPLICANT: Aventis CropScience GmbH
 5 <120> TITLE OF INVENTION: Promoters for gene expression in caryopses of plants
 7 <130> FILE REFERENCE: 514413-3885
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/899,595
 C--> 9 <141> CURRENT FILING DATE: 2001-07-05
 9 <150> PRIOR APPLICATION NUMBER: DE 100 32 379.0
 10 <151> PRIOR FILING DATE: 2000-07-05
 12 <160> NUMBER OF SEQ ID NOS: 18
 14 <170> SOFTWARE: PatentIn version 3.0
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 5058
 18 <212> TYPE: DNA
 19 <213> ORGANISM: Triticum aestivum
 21 <400> SEQUENCE: 1

22	tctagagagg	tcacccgtca	gtctatccta	agcgtgaagg	ggatcatgagc	caatcactct	60
24	aagcactcct	gcacgtggcg	cgactggtcg	gggaccaagc	ccacctctat	atacacagca	120
26	ggcatgccgc	tcaccccaac	aatcagcccg	cagtctgtac	tgtgacatca	ggcagagctt	180
28	tcgggaggaa	ctgacgacgc	tgagggggccc	atacaccata	atcccacggg	gtgattagtg	240
30	tgtatatgcc	agtgacagtc	tcagatcaaa	tactcaaadc	ttgttgagcg	tgttattaag	300
32	aaataacctt	ggacatcgac	caggggccag	gcccacttct	ctcctagggtg	gtctctacct	360
34	gccttgctgt	tccgccacgt	tgaatcactc	gaggtgtctg	ggaacccagg	cctatcacta	420
36	cctagatggt	accatctatt	ccttcagccc	ttagttcgaa	cattatcata	agtattacgt	480
38	tattatatag	tatatctgtg	atcattggcc	aaagagacca	cggctcaata	atgtagcaat	540
40	gcaaacggtg	agactctagc	agacaactaa	catittattta	ctttgcagcg	aagcacgggt	600
42	gattcaagat	agttctaatt	tttttaaaga	cggttctaac	tctttttttt	acggcaacac	660
44	ggttctaatt	ctaccgttgc	aacgcacaag	gagatgtgct	ggtctctaac	aatgtatgta	720
46	ggagtttttt	gttgcatgga	tcggacgggt	gaagatcgta	atataagtca	cctttgacgg	780
48	tcgggaaaat	ggcggttatt	tctgtgtttt	cagacggctg	acgcctggca	atcaccccaa	840
50	aaatatTTTT	gtatgcgagg	aggatcacct	gccgccggct	gacatccgcc	acatcagtag	900
52	gttaggccaa	ctcctccgct	tgccaccgaa	ttaagctcgc	tgaaaagttc	ccctcccgac	960
54	gcttcgcagg	taggtagggtg	catccatccc	caactccccg	gccgtgccgc	acacccccat	1020
56	ctatatatgc	aatccagtc	cattcctgat	caaccaggac	ttgattagta	gagcaagagg	1080
58	cctgaacaag	cacgcgctcg	cagatcatcg	acatgggttg	tgagaggacg	ccgctggccg	1140
60	ttgctctggc	actggccctg	ctcctgggcc	tcgcccacgg	cgacgtgggtg	cagttcatct	1200
62	tcggcgactc	gctgtcgagc	gtgggcaaca	acaactacct	gaccaagagc	ctcgcgcgcg	1260
64	cggcgctgcc	gtggtagggc	atcgacttcg	gcagcgccat	gcccacgggc	aggttctgca	1320
66	acggccgcac	cgtcgcgggc	atcatcgggc	acaagatggg	cctcccgcgc	ccgcccgcgt	1380
68	tcctggaccc	gtccgtggac	gagaccgtca	tcgccaagag	cggcctcaac	tacgcgtccg	1440
70	gcggcgggcg	catcctcaac	gagacctcgt	ccctcttcgt	aagacaccca	tccatcactt	1500
72	caccaacttc	tcgtagctag	acagcatggt	agtatcatga	gacatgaacg	ctccggttcg	1560
74	atcatcgcat	ctgactgaga	cccatggcgc	atgcatttgc	agatccagag	gttctcgctg	1620
76	tacaagcaga	tcgagctgtt	ccaggggacg	caggcggttc	tcggggagaa	gatcggggcg	1680
78	gcggcgggcg	acaagctgtt	cggcgaggcc	tactacgtgg	tggccatggg	cgccaacgac	1740
80	ttcatcaaca	actacctgct	ccccgtctac	tccgactcgt	ggacctacaa	cggcgacacc	1800
82	ttcgtcaagt	acatggtcac	caccctggag	gcccagctcc	ggctcctgca	cgggctgggc	1860
84	gcgcgccggg	tcaccttctt	cgggctgggg	cccatgggct	gcaccccgct	gcagcggctc	1920
86	ctgcagaggt	cctccacggc	gtgccaggag	tccaccaaca	agctcgccct	cagcttcaac	1980

RAW SEQUENCE LISTING

DATE: 12/20/2001

PATENT APPLICATION: US/09/899,595

TIME: 13:47:38

Input Set : A:\00033412.txt

Output Set: N:\CRF3\12202001\I899595.raw

```

88 aagcaggccg gcgcggtgat cagggagctg gcggcgctgc tgcccaacgc cacgttccag 2040
90 ttccggggacg tctacgacta cttccaggac atcatcgacc gccctacat gcacggcttc 2100
92 aacaactccc acgcgcctctg ctgcacgctc ggcaagggtg gcccgaccct gacgtgcacc 2160
94 ccgctctcca cgctctgcaa ggaccgcagc aagtacgtgt tctgggacga gtaccacccc 2220
96 accgacaggg ccaacgagct catcgcgctc gagacgctca agcggtcaa catcaccgtc 2280
98 gttgccaaca ccacctccag ctagcctgcc tgccgtgccac cgacgccgcc caccaaaatg 2340
100 cgtacgcttc gacatgcatg ggcgctgctg ctgtgtgttg tcttaattat actgcgggtg 2400
102 cttcgattgt aaccaaagta ggatgatcga aaattctagg atgatgtcca agaaatggga 2460
104 tggagaatag atgcatgtac gtgtcctgga tatgaaattt ttttgagtat gagagaacag 2520
106 cataccagga tcatgcatct atcttaaate tcaagaggcc actattaaga cgttgatgtt 2580
108 taagacggtg atgttctatt tgcatgtgaa atttcaagtt caaagacggt accatttatg 2640
110 agctatggaa tcagccatga atagtgtgtt ttaactgtga cactattcat tgctgctttt 2700
112 gtcttttggg aatgtgtttg aacttggaat ttccacatac taatagaaca tcacactctt 2760
114 aagacgtaat atttctttga gattttatgt ttgaaacttc gcctgaaggg tgctgatgtg 2820
116 cccgctattc atctaggaga ctaggaaaat atatgcaaaa aaattcatac atatttataa 2880
118 atgataaata tgtatagaga aaatgtttat caactataga aaaatatatg caaaaaatat 2940
120 aaatatgtat gaattttttt agcaagtatt taaatctagc atttgaaaga aaaataaaca 3000
122 agtattagaa aaatgttaaa cgtgtataga aaaatgttac catgtaatta aaaattgtat 3060
124 aaaattatca tgtattttta aaaaaataac caagcattta aaaacaaata tttaaaaaatg 3120
126 ttaataaagg atttgaaaaa ttctaaacgt gtatacaaaa atgttgacca tgtattaaaa 3180
128 aatgttaatc ttgtatttaa aaatgtaatc aagcatttag aaaaacagtt aaattgtata 3240
130 gaaatgtacc cagaaaatct tgatattata tttcaaaaat gtaatcaagc atttgaaaaa 3300
132 tatttttaaa atgtgtatag aaaaaatgtt aaccatgtat ttaaaaaatt ttaaaactgt 3360
134 atttgaaaca tgtaaatcat gtattagata tataccaaat atgtatgtaa aataacaatg 3420
136 aaaatccaag ggaaacgaaa gaaaaacaaa tgaaaacggg aaaaaacaa aaaatgaagg 3480
138 aaaaaaaga aaaaacattg aaaaccaaga aagaaacaaa gagaaccgga gaataacaa 3540
140 caaaagggaa agaaaagggtg aaaaaactag taaaaacaag aaacaaagaa aaaaggatga 3600
142 caaacaagga aaaaaattaa aaatccggaa aggcaacggt aagacgactc ttttccttca 3660
144 agttggtagc gccctaccag ggtaaacaga acttgacgat gactttatgg ctaggagagc 3720
146 tacgctggaa cgaggagatc cggaccaaac catgtgcgct acaaaagtgt attattattt 3780
148 ttgcaaaaa tgatccgaat ctattatcaa aattcagcga aatacaaaac atctcgaaca 3840
150 taatgaacaa tacattgaga ttccaggacc ccaaacaccc actactgccg cgaagaaaaa 3900
152 aggattggga ggacagaaat taccctaacc acgttcgtcc tcggttggtg gtctcatcgc 3960
154 gcgctaaaca acctggacaa cagaaaaggc aaagcagtgt cctccgctcc gcagcaaga 4020
156 agacaaatcg tcaattgtca gaggccgtca ccaagcaag caaactgcaa agcttggtcg 4080
158 tttggtttat cccgtagtac gcgccaacgc atgtgccgca ccgcgtttgc ggtggagagc 4140
160 gcaggcatgc atcaaccaac aaacgaaaaca gtgcagttgc ttacagtgtc ccattccctc 4200
162 aaaaaaaaaa gttgcagtg tctatctatc tatctacaca atcaacgcgg gcctcctgct 4260
164 ccttcgccgc aagccccgtt ccgtcctcag tcttcacgtg gattctgcaa cctccttcca 4320
166 gcagcttgtc accacggacg cttcctcgtg cgctgctcgc gtggcaccgg ccccgcttcc 4380
168 cagcgtgctc cgcgcgggcc gcggccgcaa atcgacagacc caacacgcca cccgcaggg 4440
170 ggccgttcgt acgtacccgc cctcctgtga aagccgcgc cgctcgtccc gtccccgct 4500
172 cgcggccatt tccccgcct gaccccgctg gtttaccaca cagagcacac tccagtcag 4560
174 tccagcccac tgccgcccgc ctactcccca ctcccgctgc caccacctcc gcctgcgcgc 4620
176 cgctctgggc ggaggaccaa cccgcgcac gtaccatgc ccgccccgat cccgcccgc 4680
178 gggatgtcgt cggcggtcgc gtccgcccgc tcttctctcg cgctcgctcc cgctcccc 4740
180 gggagatcac gcaggcgggc gagggtagc gcgcccgcac ccaacgcccg ggccggcagg 4800
182 ctgcactggc cgccgtggcc gccgcagcgc acggctcgc acggaggtgt ggccgcgcgc 4860
184 gccgcccggg agaaggacgc gagggctcgc gacgacgcc cgctccgcgc gcagccccgc 4920

```

RAW SEQUENCE LISTING

DATE: 12/20/2001

PATENT APPLICATION: US/09/899,595

TIME: 13:47:38

Input Set : A:\00033412.txt

Output Set: N:\CRF3\12202001\I899595.raw

```

186 gcacgccgcg gtggcgccgc caccaaggta gttggttcgt tatgacttgc tgtatggcgc 4980
188 gtgcgcctcg agatcagctc acgaattggt tctacaaaac gcacgcgctc gtgtgcaggt 5040
190 cgcggagcgg agggatcc 5058
193 <210> SEQ ID NO: 2
194 <211> LENGTH: 844
195 <212> TYPE: DNA
196 <213> ORGANISM: Triticum aestivum
198 <400> SEQUENCE: 2
199 tctagagagg tcacccgtca gtctatccta agcgtgaagg ggtcatgagc caatcactct 60
201 aagcactcct gcacgtggcg cgactggtcg gggaccaagc ccacctctat atacacagca 120
203 ggcatgccgc tcacccaac aatcagcccg cagtctgtac tgtgacatca ggcagagctt 180
205 tcgggaggaa ctgacgacgc tgaggggccc atacaccata atccacggg gtgattagt 240
207 tgtatatgcc agtgacagtc tcagatcaaa tactcaaadc ttgttgagcg tgttattaag 300
209 aaataacctt ggacatcgac cagggcccg gccacttct ctctaggtg gtctctacct 360
211 gccttgtcgt tccgccacgt tgaatcactc gaggtgtcgc ggaaccagg cctatcacta 420
213 cctagatggt accatctatt ccttcagccc ttagttcgaa cattatcata agtattacgt 480
215 tattatatag tatactgtgt atcattggcc aaagagacca cggtcaata atgtagcaat 540
217 gcaaacggtg agactctagc agacaactaa catttatcta ctttgcagcg aagcacgggt 600
219 gattcaagat agttctaatt tttttaaaga cgttctaata tctttttttt acggcaacac 660
221 ggttctaatt ctaccgttgc aacgcacaag gagatgtgct ggtctctaac aatgtatgta 720
223 ggagtttttt gttgcatgga tcggacgggt gaagatcgta atataagtca cttttgacgg 780
225 tcgggaaaaat ggcggttatt tctgtgtttt cagacggctg acgcctggca atcaccccaa 840
227 aaat 844
230 <210> SEQ ID NO: 3
231 <211> LENGTH: 880
232 <212> TYPE: DNA
233 <213> ORGANISM: Triticum aestivum
235 <400> SEQUENCE: 3
236 atttttgtat gcgaggagga tcacctgccg ccggtcgaca tccgccacat cagtaggtta 60
238 ggccaactcc tccgcttgcc accgaattaa gctcgtgaa aagttccct cccgacgctt 120
240 cgcaggtagg taggtgcac catccccaac tccccggccg tgccgcacac ccccatctat 180
242 atatgcaaat ccagtcatt cctgatcaac caggacttga ttagtagagc aagaggcctg 240
244 aacaagcacg cgctcgaga tcatcgacat gggttgtgag aggacgccgc tggccgttgc 300
246 tctggcactg gccctgctcc tgggcctcgc ccacggcgac gtggtgcagt tcatcttcg 360
248 cgactcgctg tcggacgtgg gcaacaacaa ctacctgacc aagagcctcg cgcgcgcggc 420
250 gctgccgtgg tacggcatcg acttcggcag cggcatgccc aacggcagg tctgcaacgg 480
252 ccgcaccgtc gcggacatca tcggcgacaa gatgggcctc ccgcgcccgc ccgcgttct 540
254 ggacccgtcc gtggacgaga ccgtcatcgc caagagcggc ctcaactacg cgtccggcgg 600
256 cggcggcatc ctcaacgaga cctcgtccct ctctgtaaga ccccatcca tcacttcacc 660
258 aacttctcgt agctagacag catggtagta tcatgagaca tgaacgctcc ggttcgatca 720
260 tcgcatctga ctgagaccca tggcgcatgc atttgcagat ccagaggttc tcgctgtaca 780
262 agcagatcga gctgttccag gggacgcagg cgttcatgcg ggagaagatc gggcgggcgg 840
264 cggcggacaa gctgttcggc gaggcctact acgtggtggc 880
267 <210> SEQ ID NO: 4
268 <211> LENGTH: 516
269 <212> TYPE: DNA
270 <213> ORGANISM: Triticum aestivum
272 <400> SEQUENCE: 4
273 catggggcgc aacgaattca tcaacaacta cctgctcccc gtctaactccg actcgtggac 60

```

RAW SEQUENCE LISTING

DATE: 12/20/2001

PATENT APPLICATION: US/09/899,595

TIME: 13:47:38

Input Set : A:\00033412.txt

Output Set: N:\CRF3\12202001\I899595.raw

```

275 ctacaacggc gacaccttcg tcaagtacat ggtcaccacc ctggaggccc agctccggct 120
277 cctgcacggg ctgggcgcgc gccgggtcac cttcttcggg ctggggccca tgggctgcat 180
279 cccgctgcag cggctcctgc agaggctcctc cacggcgtgc caggagtcca ccaacaagct 240
281 cgccctcagc ttcaacaagc aggccggcgc ggtgatcagg gagctggcgg cgctcgctgcc 300
283 caacgccacg ttccagttcg gggacgtcta cgactacttc caggacatca tcgaccgccc 360
285 ctacatgcac ggcttcaaca actcccacgc gccctgctgc acgctcggca aggtgcggcc 420
287 gaccctgacg tgcaccccg cctccacgct ctgcaaggac cgcagcaagt acgtgttctg 480
289 ggacgagtac caccaccg acagggccaa cgagct 516
292 <210> SEQ ID NO: 5
293 <211> LENGTH: 502
294 <212> TYPE: DNA
295 <213> ORGANISM: Triticum aestivum
297 <400> SEQUENCE: 5
298 catcgcgctc gagacgtca agcgggtcaa catcacgctc gttgccaaaca ccacctccag 60
300 ctagcctgcc tgccctgccac cgacgccgcc caccaaaatg cgtacgcttc gacatgcatg 120
302 ggcgctgctg ctgtgtgttg tottaattat actgcgggtg cttcgattgt aaccaaagta 180
304 ggatgatcga aaattctagg atgatgtcca agaaatggga tggagaatag atgcatgtac 240
306 gtgtcctgga tatgaaattt ttttgagtat gagagaacag cataccagga tcatgcatct 300
308 atcttaaatac tcaagaggcc actattaaga cgttgatgtt taagacggtg atgttctatt 360
310 tgcattgtgaa atttcaagtt caaagacggt accatttatg agctatggaa tcagccatga 420
312 atagtgatgt ttactgttga cactattcat tgctgctttt gtcttttggg aatgtgtttg 480
314 aacttggaaa tttcacatac ta 502
317 <210> SEQ ID NO: 6
318 <211> LENGTH: 261
319 <212> TYPE: DNA
320 <213> ORGANISM: Triticum aestivum
322 <400> SEQUENCE: 6
323 atagaacatc acactcttaa gacgtaatat ttctttgaga ttttattttt gaaacttcgc 60
325 ctgaaggggtg ctgatgtgcc cgctattcat ctaggagact aggaaaaatat atgcaaaaaa 120
327 attcatacat atttaaaaaat gataaatatg tataagagaaa atgtttatca actatagaaa 180
329 aatatatgca aaaaatataa atatgtatga attttttttag caagtattta aatctagcat 240
331 ttgaaagaaa aataaacaag t 261
334 <210> SEQ ID NO: 7
335 <211> LENGTH: 327
336 <212> TYPE: DNA
337 <213> ORGANISM: Triticum aestivum
339 <400> SEQUENCE: 7
340 attagaaaaa tgttaaactg gtatagaaaa atgttaccat gtaattaaaa attgtataaa 60
342 attatcatgt atttttaaaa aaataaccaa gcatttaaaa acaaatattt aaaaatgtta 120
344 ataaaggatt tgaaaaaattc taaacgtgta tacaaaaatg ttgaccatgt attaaaaaat 180
346 gttaatcttg tatttataaaa tgtaatcaag catttagaaa aacagttaaa ttgtatagaa 240
348 atgtacccag aaaatcttga tattatattt caaaaatgta atcaagcatt tgaaaaaatat 300
350 tttaaaaatg tgtatagaaa aaatggt 327
353 <210> SEQ ID NO: 8
354 <211> LENGTH: 236
355 <212> TYPE: DNA
356 <213> ORGANISM: Triticum aestivum
358 <400> SEQUENCE: 8
359 aaccatgtat ttaaaaaatt ttaaacttgt atttgaaaca tgtaaatcat gtattagata 60

```

RAW SEQUENCE LISTING

DATE: 12/20/2001

PATENT APPLICATION: US/09/899,595

TIME: 13:47:38

Input Set : A:\00033412.txt

Output Set: N:\CRF3\12202001\I899595.raw

```

361 tataccaaat atgtatgtaa aataacaatg aaaatccaag ggaaacgaaa gaaaaacaaa 120
363 tgaaaacggg aaaaaaacaa aaaatgaagg aaaaaaaaga aaaaacattg aaaaccaaga 180
365 aagaaacaaa gagaaccgga gaataacaaa caaaagggaag agaaaagggtg aaaaaa 236
368 <210> SEQ ID NO: 9
369 <211> LENGTH: 504
370 <212> TYPE: DNA
371 <213> ORGANISM: Artificial Sequence
373 <220> FEATURE:
374 <223> OTHER INFORMATION: promoter
376 <400> SEQUENCE: 9
377 ctagtataaaa caagaaacaa agaaaaaagg atgacaaaaca aggaaaaaaa ttaaaaaatcc 60
379 ggaaaggcaa cggtaagacg actcttttcc ttcaagttgg tagcgcccta ccagggtaac 120
381 acgaacttga cgatgacttt atggctagga gagctacgct ggaacgagga gatccggacc 180
383 aaaccatgtg cgctacaaaa gtgtattatt attttttgca aaaatgatcc gaatctatta 240
385 tcaaaattca gcgaaataca aaacatctcg aacataatga acaatacatt gagattccag 300
387 gaccccaaac aaccactact gccgcgaaga aaaaaggatt gggaggacag aaattatcct 360
389 aaccacgttc gtcctcgggt gttggtctca tcgcgcgcta aacaacctgg acaacagaaa 420
391 aggcaaagca gtgtcctccg ctccgcagca aagaagacaa atcgtcactt gtcagaggcc 480
393 gtcaccaag caagcaaact gcaa 504
396 <210> SEQ ID NO: 10
397 <211> LENGTH: 441
398 <212> TYPE: DNA
399 <213> ORGANISM: Artificial Sequence
401 <220> FEATURE:
402 <223> OTHER INFORMATION: promoter
404 <400> SEQUENCE: 10
405 agcttgttcg tttggtttat cccgtagtac gcgccaacgc atgtgccgca ccgcgtttgc 60
407 ggtggagagc gcaggcatgc atcaaccaac aaacgaaaaca gtgcagttgc ttacagtgtc 120
409 ccatccctcc aaaaaaaaaa gttgcagtgc tctatctatc tatctacaca atcaacgcgg 180
411 gcctcctgct ccttcgccgc aagccccgtt ccgtcctcag tcttcacgtg gattctgcaa 240
413 cctccttcca gcagcttgtc accacggacg cttcctcgtg cgtgctcgc gtggcaccgg 300
415 ccccgctttc cagcgtgctc cgcgcgggcc gcggccgcaa atcgcagacc caacacgcca 360
417 cccgccaggg ggccgttcgt acgtacccgc cctcgtgta aagccgccgc cgtcgtcgc 420
419 gtcccccgct cgcggccatt t 441
422 <210> SEQ ID NO: 11
423 <211> LENGTH: 20
424 <212> TYPE: DNA
425 <213> ORGANISM: Artificial Sequence
427 <220> FEATURE:
428 <223> OTHER INFORMATION: primer
430 <400> SEQUENCE: 11
431 ctgctggaca ggatatggaa 20
434 <210> SEQ ID NO: 12
435 <211> LENGTH: 20
436 <212> TYPE: DNA
437 <213> ORGANISM: Artificial Sequence
439 <220> FEATURE:
440 <223> OTHER INFORMATION: primer
442 <400> SEQUENCE: 12

```

VERIFICATION SUMMARY

DATE: 12/20/2001

PATENT APPLICATION: US/09/899,595

TIME: 13:47:39

Input Set : A:\00033412.txt

Output Set: N:\CRF3\12202001\I899595.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date